AMENDMENTS TO THE CLAIMS

1. (Currently amended) An interferometric device for measuring an out-of-plane deformation of an object surface, comprising:

means for producing successive interferograms at a predetermined nominal rate of phase change from a light beam reflected from the object surface;

means for implementing an algorithm for interferometric analysis of said interferograms; and

means for changing said predetermined nominal rate such that each phase change between successive data-acquisition frames falls within an operational window of the algorithm;

wherein said means for implementing an algorithm for interferometric analysis includes a means for calculating said out-of-plane deformation.

2. (Original) The device of Claim 1, wherein said means for producing successive interferograms includes a scanner operating at said predetermined nominal rate of phase change.

3. (Original) The device of Claim 1, wherein said means for producing successive interferograms includes a light detector triggered at said predetermined nominal rate of phase change.

4. (Original) The device of Claim 1, wherein said means for acquiring successive interferograms includes a light source capable of varying a wavelength to produce said predetermined nominal rate of phase change.

5. (Original) The device of Claim 1, wherein said means for acquiring successive interferograms includes a means for changing an index of refraction along an optical path of the interferometric device to produce said predetermined nominal rate of phase change.

6. (Original) The device of Claim 1, wherein said means for acquiring successive interferograms includes a means for changing a polarization state of an interfering light beam to produce said predetermined nominal rate of phase change.

7. (Original) The device of Claim 1, wherein said means for acquiring successive interferograms includes a tilting plate used to produce said predetermined nominal rate of phase change.

8. (Original) The device of Claim 1, wherein said means for acquiring successive interferograms includes a tilting grating used to produce said predetermined nominal rate of phase change.

9. (Original) The device of Claim 2, wherein said means for changing said predetermined nominal rate comprises a driving signal operating on the scanner.

10. (Original) The device of Claim 1, wherein said means for changing said predetermined nominal rate comprises a driving signal operating on a sample stage.

11. (Original) The device of Claim 1, wherein said means for changing said predetermined nominal rate comprises a driving signal operating on a reference mirror of the interferometric device.

12. (Original) The device of Claim 1, wherein said means for changing said predetermined nominal rate comprises a driving signal operating on an objective of the interferometric device.

13. (Original) The device of Claim 1, further comprising a reference signal circuit applied to said means for acquiring successive interferograms.

14. (Previously presented) The device of Claim 1, wherein said means for changing the predetermined nominal rate is applied equally at each pixel of the object surface.

15. (Previously presented) The device of Claim 1, wherein said means for changing the predetermined nominal rate is applied at each pixel of the object surface as a function of said out-of-plane deformation at said pixel.

16. (Original) The device of Claim 1, wherein said means for changing the predetermined nominal rate includes a substantially linear component combined with the nominal rate.

17. (Original) The device of Claim 1, wherein said means for changing the predetermined nominal rate includes a substantially periodic component combined with the nominal rate.

18. (Currently amended) A method for measuring an out-of-plane deformation of an object surface in an object using an interferometric device, comprising the following steps:

acquiring successive interferograms produced at a predetermined nominal rate of phase change from a light beam reflected from said object surface;

implementing an algorithm for interferometric analysis of said interferograms;

changing said predetermined nominal rate such that each phase change between successive data-acquisition frames falls

within an operational window of the algorithm; ~~and~~

calculating said out-of-plane deformation; and

utilizing said out-of-plane deformation to determine a motion of the object surface during operation of the object.

19. (Original) The method of Claim 18, wherein said step of acquiring successive interferograms is carried out with a scanner operating at said predetermined nominal rate of phase change.

20. (Original) The method of Claim 18, wherein said step of acquiring successive interferograms is carried out with a light detector triggered at said predetermined nominal rate of phase change.

21. (Original) The method of Claim 18, wherein said step of acquiring successive interferograms is carried out with a light source capable of varying a wavelength to produce said predetermined nominal rate of phase change.

22. (Original) The method of Claim 18, wherein said step of acquiring successive interferograms is carried out with a means for changing an index of refraction along an optical path of the interferometric device to produce said predetermined nominal

rate of phase change.

23. (Original) The method of Claim 18, wherein said step of acquiring successive interferograms is carried out with a means for changing a polarization state of an interfering beam to produce said predetermined nominal rate of phase change.

24. (Original) The method of Claim 18, wherein said step of acquiring successive interferograms is carried out with a means for shifting projected fringes to produce said predetermined nominal rate of phase change.

25. (Original) The method of Claim 18, wherein said step of acquiring successive interferograms is carried out with a tilting plate to produce said predetermined nominal rate of phase change.

26. (Original) The method of Claim 18, wherein said step of acquiring successive interferograms is carried out with a tilting grating to produce said predetermined nominal rate of phase change.

27. (Original) The method of Claim 19, wherein said step of changing said predetermined nominal rate is carried out with a

driving signal operating on the scanner of the interferometric device.

28. (Original) The method of Claim 19, wherein said scanner actuates an objective of the interferometric device.

29. (Original) The method of Claim 19, wherein said scanner actuates a sample stage of the interferometric device.

30. (Original) The method of Claim 19, wherein said scanner actuates a reference mirror of the interferometric device.

31. (Previously presented) The method of Claim 18, further comprising the step of providing a reference signal to correct scanner errors produced during said step of acquiring successive interferograms.

32. (Previously presented) The method of Claim 18, wherein said step of changing the predetermined nominal rate is applied equally at each pixel of the object surface.

33. (Previously presented) The method of Claim 18, wherein said step of changing the predetermined nominal rate is carried out at each pixel of the object surface as a function of said

out-of-plane deformation at said pixel.

34. (Original) The method of Claim 18, wherein said step of changing the predetermined nominal rate includes the use of a substantially linear component combined with the nominal rate.

35. (Original) The method of Claim 18, wherein said step of changing the predetermined nominal rate includes the use of a substantially periodic component combined with the nominal rate.

36. (Original) The method of Claim 18, wherein said step of acquiring successive interferograms at a predetermined nominal rate of phase change is carried out with a strobed light.

37. (Original) The method of Claim 18, wherein said step of changing said predetermined nominal rate such that each phase change between successive data-acquisition frames falls within an operational window of the algorithm is carried out with a feedback signal based on said out-of-plane deformation of the object surface.

38. (Previously presented) A method for measuring an out-of-plane deformation of an object surface using an interferometric device, comprising the following steps:

acquiring successive interferograms produced at a predetermined nominal rate of phase change from a light beam reflected from said object surface;

implementing an algorithm for interferometric analysis of said interferograms; and

changing said predetermined nominal rate such that each phase change between successive data-acquisition frames falls within an operational window of the algorithm;

wherein said step of changing said predetermined nominal rate such that each phase change between successive data-acquisition frames falls within an operational window of the algorithm is carried out with a feedback signal based on a prior knowledge of said out-of-plane deformation of the object surface.